

In the Claims:

While Applicants do not concede the Examiner's rejections related to claims 1-8, Applicants ask that the Examiner please cancel claims 1-8 and that the Examiner add the following claims for further prosecution:

9. (New) An expert system, comprising:
- a data storage device, storing
 - a plurality of models, each model including a plurality of attributes including a variable attribute;
 - a plurality of objectives, each objective including an objective rule for evaluating a characteristic of the model; and
 - a plurality of strategies, each strategy including a strategic rule for modifying the variable attribute; and
 - a processor coupled to the data storage device, the processor including instructions which, when executed by the processor, cause the processor to:
 - evaluate a selected model in accordance with a selected objective and having the variable attribute set in accordance with a selected strategy to determine a characteristic value associated with the selected model and the variable attribute setting;
 - determine, using the objective rule, whether the characteristic value is an improvement over a previous characteristic value; and
 - store a result in the storage device when the characteristic value is an improvement over the previous characteristic value, the result including an identification of the selected model and the variable attribute setting used to determine the improved characteristic value.
10. (New) The expert system of claim 9, wherein the plurality of models, the plurality of objectives, and the plurality of strategies are organized in a knowledgebase in the data storage device.

11. (New) The expert system of claim 9, wherein the data storage device further stores a sub-knowledgebase, the sub-knowledgebase including at least one model, at least one objective, and at least one strategy and wherein a user selects a model, an objective, and a strategy from the sub-knowledgebase for processing by the processor.

12. (New) The expert system of claim 9, wherein the identification of the model includes storing the model with the result.

13. (New) The expert system of claim 9, wherein the identification of the model includes storing a pointer to the model with the result.

14. (New) The expert system of claim 9, wherein the instructions cause the processor to evaluate more than one of the plurality of models.

15. (New) The expert system of claim 9, wherein the instructions cause the processor to create a new model having the plurality of attributes of the selected model and a variable attribute value determined using the strategy.

16. (New) The expert system of claim 9, wherein the selected model is selected from the plurality of models stored in the data storage device.

17. (New) The expert system of claim 9, wherein the objective rule includes a goal.

18. (New) The expert system of claim 9, wherein the selected objective is selected from the plurality of objectives stored in the data storage device.

19. (New) The expert system of claim 9, wherein each strategy further includes an identification of the variable attribute to which the strategic rule applies.

20. (New) The expert system of claim 9, wherein the model selected from the plurality of models includes a plurality of variable attributes and the strategy selected from the plurality of models includes a strategic rule for each of at least a subset of the plurality of variable attributes.

21. (New) The expert system of claim 20, wherein the selected strategy further includes an identification of the variable attributes to which the strategic rules apply.

22. (New) The expert system of claim 9, wherein the strategic rule defines how the variable attribute is to be varied.

23. (New) The expert system of claim 9, wherein the strategic rule includes a range of values for the variable attribute.

24. (New) The expert system of claim 9, wherein the instructions cause the processor to evaluate the model in accordance with more than one of the plurality of strategies.

25. (New) The expert system of claim 9, wherein the selected strategy is selected from the plurality of strategies stored in the data storage device.

26. (New) The expert system of claim 9, further comprising an input device coupled to the processor, the input device to accept instructions from a user.

27. (New) The expert system of claim 9, wherein the processor receives instructions from the input device which further cause the processor to create the selected model.

28. (New) The expert system of claim 9, wherein the processor receives instructions from the input device which further cause the processor to create the selected objective.

29. (New) The expert system of claim 9, wherein the selected objective is stored in the storage device if the characteristic value is an improvement over a previous characteristic value.

30. (New) The expert system of claim 9, wherein the processor receives instructions from the input device which further cause the processor to create the selected strategy.

31. (New) The expert system of claim 9, wherein the selected strategy is stored in the storage device if the characteristic value is an improvement over a previous characteristic value.

32. (New) The expert system of claim 31, wherein the processor receives instructions from the input device which further cause the processor to create a model, retrieve a selected model from the data storage device, edit a model retrieved from the data storage device, store a model in the data storage device, create an objective, retrieve a selected objective from the data storage device, edit an objective retrieved from the data storage device, store an objective in the data storage device, create a strategy, retrieve a selected strategy from the data storage device, edit a strategy retrieved from the data storage device, and store a strategy in the data storage device.

33. (New) The expert system of claim 9 further comprising an output device coupled to the processor, wherein the processor further includes instructions that cause the output device to display a selected strategy to the user, display a selected objective to the user, display a selected model to the user, display a characteristic value to the user, and display the result to the user.

34. (New) The expert system of claim 9, wherein the evaluation includes simulating the operation of a device.

35. (New) The expert system of claim 9, wherein the evaluation includes simulating a process.

36. (New) The expert system of claim 9, wherein the evaluation includes solving a problem.

37. (New) The expert system of claim 9, wherein the evaluation includes solving an equation.

38. (New) The expert system of claim 9, wherein the instructions further cause the processor to evaluate the model repeatedly using a plurality of different values for the variable attribute in accordance with the strategic rule.

39. (New) The expert system of claim 9, wherein the instructions further cause the processor to:

evaluate the selected model with the variable attribute set to a base value to determine a base characteristic value;

generate a plurality of different values for the variable attribute; and

evaluate the selected model with the variable attribute set to each of the plurality of different values to determine a characteristic value associated with the model and each variable attribute setting.

40. (New) The expert system of claim 9, wherein the instructions further cause the processor to rank the characteristic value, using the objective rule, in relation to a previous value determined for the characteristic.

41. (New) The expert system of claim 9, wherein the instructions further cause the processor to store the selected model with the variable attribute setting in the data storage device when the characteristic value is an improvement over the previous characteristic value.

42. (New) The expert system of claim 41, wherein the instructions that cause the processor to store the model with the variable attribute setting consist of instructions that cause the processor to store a pointer to a previously stored model in association with the variable attribute setting used in the evaluation.

43. (New) The expert system of claim 9, wherein the instructions further cause the processor to store the improved characteristic value.